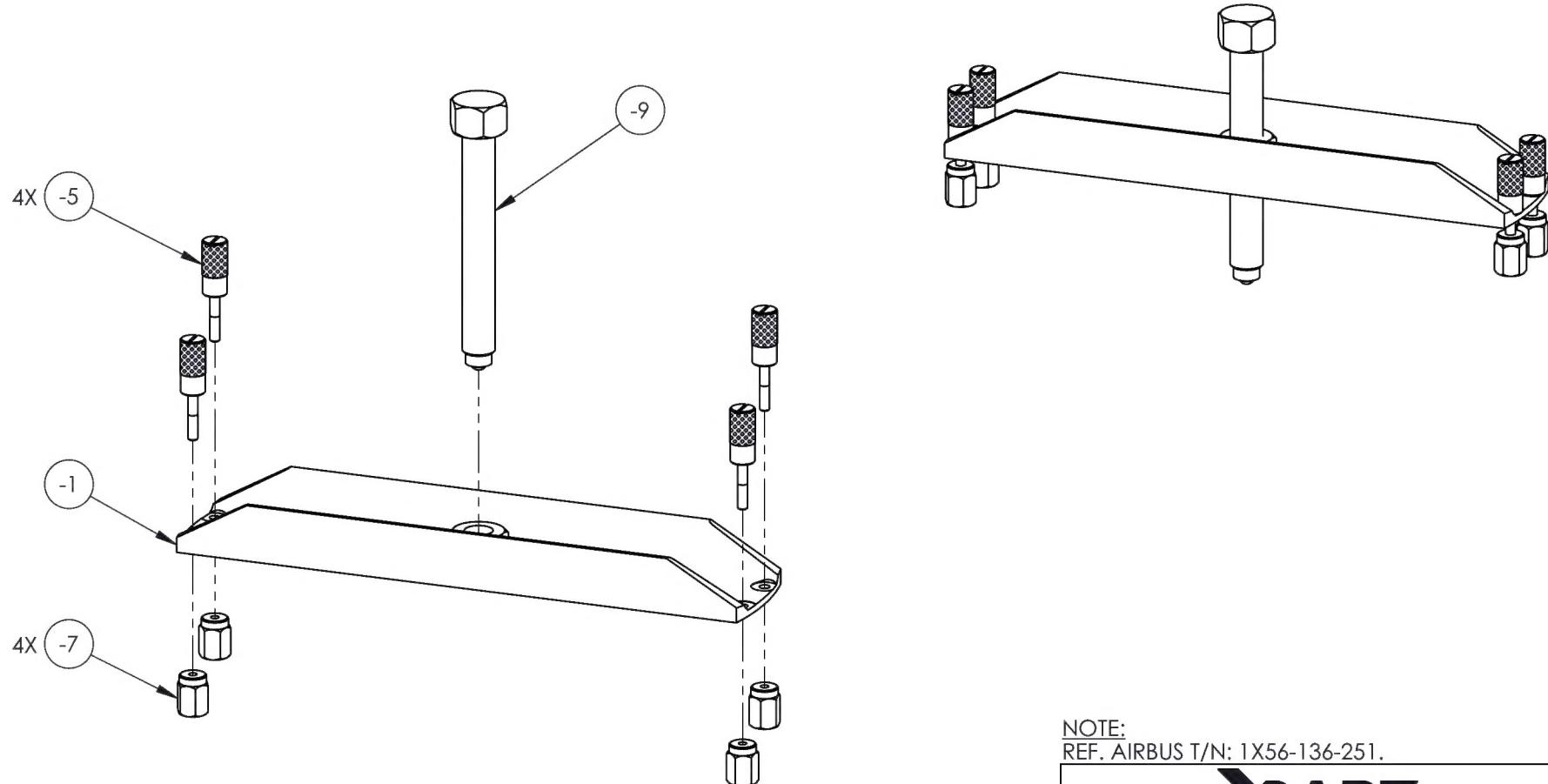


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REV			ECR			DESCRIPTION			REVISIONS			
1										DATE	INITIAL	APPROVED
1						RELEASED FOR PRODUCTION.				9/20/2016	DPD	JAG

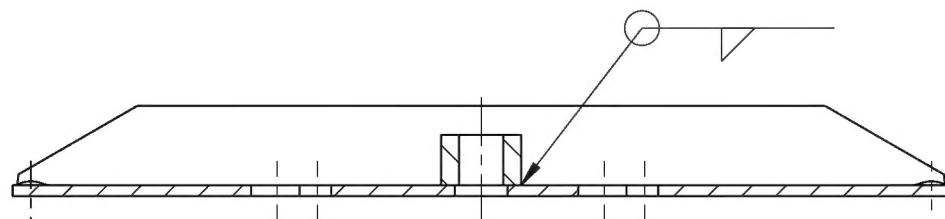
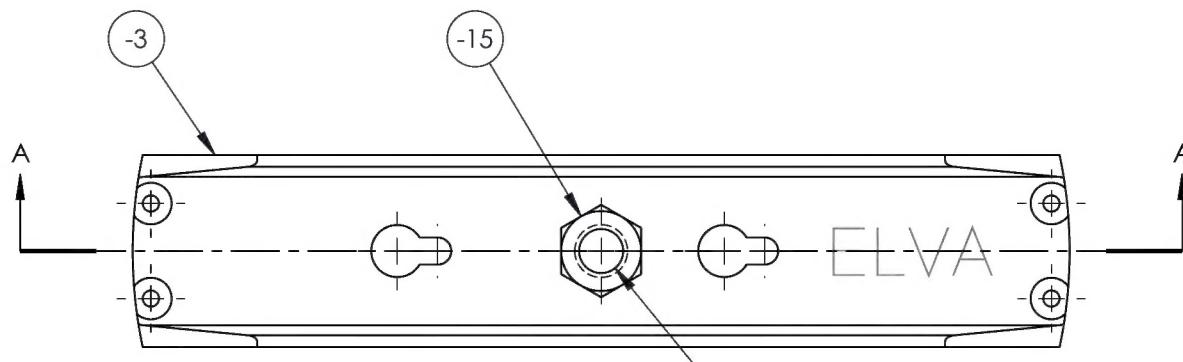


ASSY QTY	ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
		X		-1	1	FRAME WELDMENT			2
		1		-3		CHANNEL	STEEL		3
				-5	4	KNURLED BOLT	4140/4142		4
				-7	4	SPECIAL NUT	4140/4142		5
		X		-9	1	BOLT ASSEMBLY			6
X	1			-11		BOLT WELDMENT			7
1				-13		ACME ROD	STEEL	M20 X 4mm ACME (MCMASTER-CARR #97048A719) MODIFIED	7
1		1	B/O	-15		ACME HEX NUT	STEEL	M20 X 4mm ACME (MCMASTER-CARR #94353A200)	2 & 7
	1		B/O	-17		BEARING BALL	S.S.	Ø10mm (MCMASTER-CARR #1598K32)	6
ASSY -11	ASSY -9	ASSY -1							

TITLE	PULLER	
DWG NO.	RBE1X56-136-251	
REV	1	
MAT'L	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
HEAT	.XXX ± .005 FRACTIONS ± 1/8	
TREAT	.XX ± .01 ANGLES ± 5°	
FINISH	X ± .1 SURFACES = 125	
SPEC		
DRAWN BY:	DUERFELDT	
CHECKED:	CLOUGH	
OPPS APPR:	ANDERSON	
QA APPR:	LINDSAY	
APPROVED:	GILBERT H145	
SCALE	1:4	DATE 8/5/2016
		SHEET 1 OF 8

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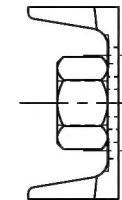
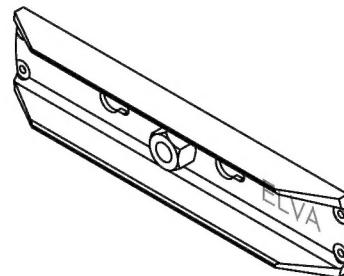
REV	ECR	REVISIONS	DESCRIPTION	DATE	INITIAL	APPROVED
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SECTION A-A

(-1)

FRAME WELDMENT

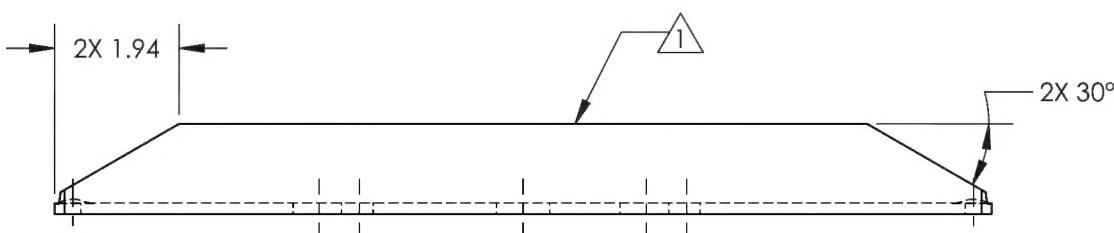
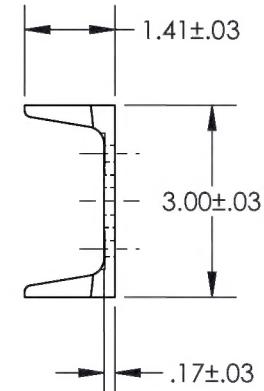
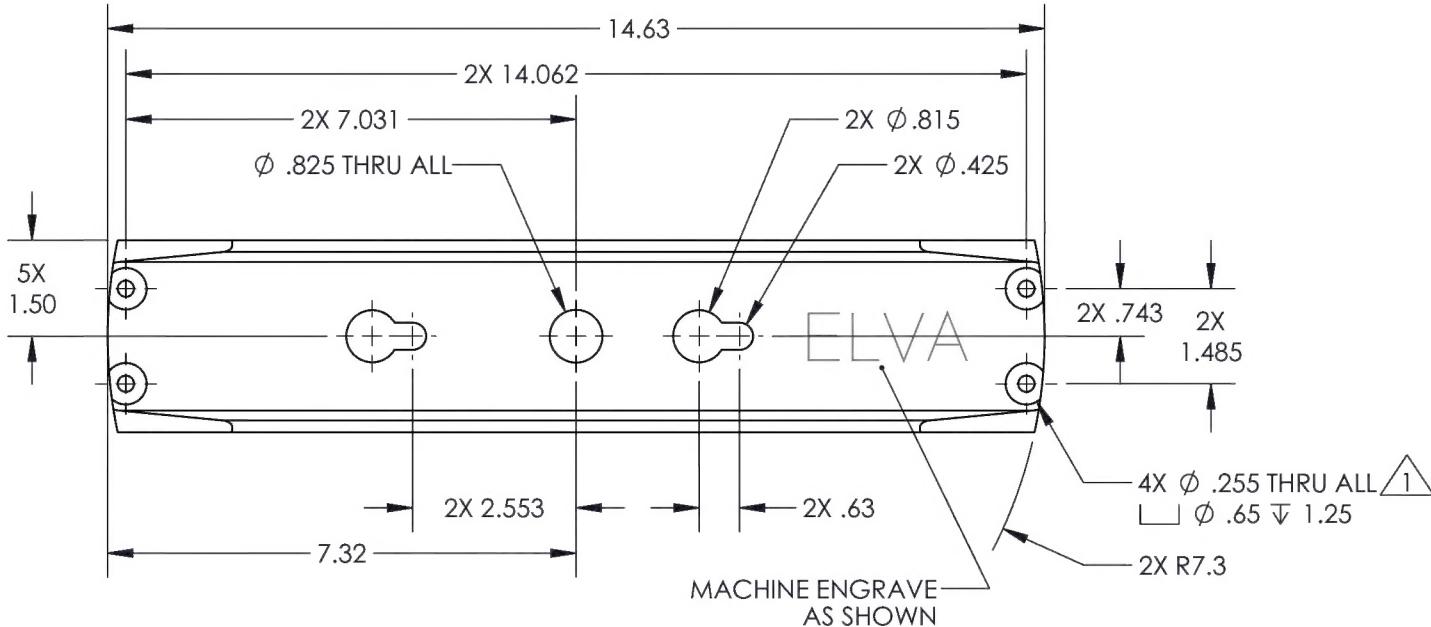
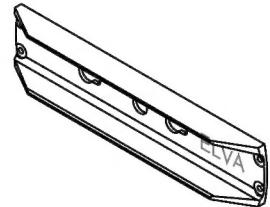


DART AEROSPACE	
TITLE	
PULLER	
DWG NO.	RBE1X56-136-251-1
REV	1
MAT'L	
HEAT	
TREAT	
FINISH ZINC PLATE	
SPEC ASTM B633 TYPE I SC 2	
DRAWN BY:	DUERFELDT
CHECKED:	CLOUGH
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
USED ON MODEL	H145
SCALE	1:3
DATE	8/5/2016
SHEET 2 OF 8	

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
.XXX ± .005 FRACTIONS ± 1/8  
.XX ± .01 ANGLES ± 5°  
X ± .1 SURFACES = 125 ✓  
1. BREAK ALL SHARP EDGES  
.015 x 45° OR .015R  
2. DIMENSIONAL LIMITS APPLY  
AFTER PLATING  
3. INTERPRET DIM AND TOL PER  
ASME Y14.5M-2009

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REVISIONS							
REV	ECR	DESCRIPTION			DATE	INITIAL	APPROVED



-3

CHANNEL

**NOTE:**

 HOLE DEPTH CALLED FROM THIS SURFACE.



**TITLE**

PULLER

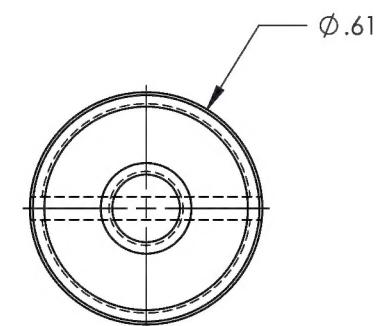
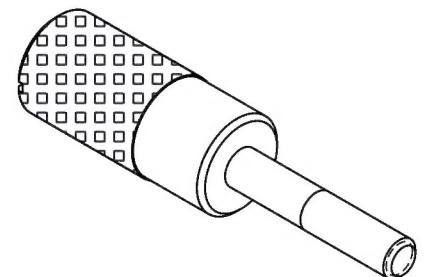
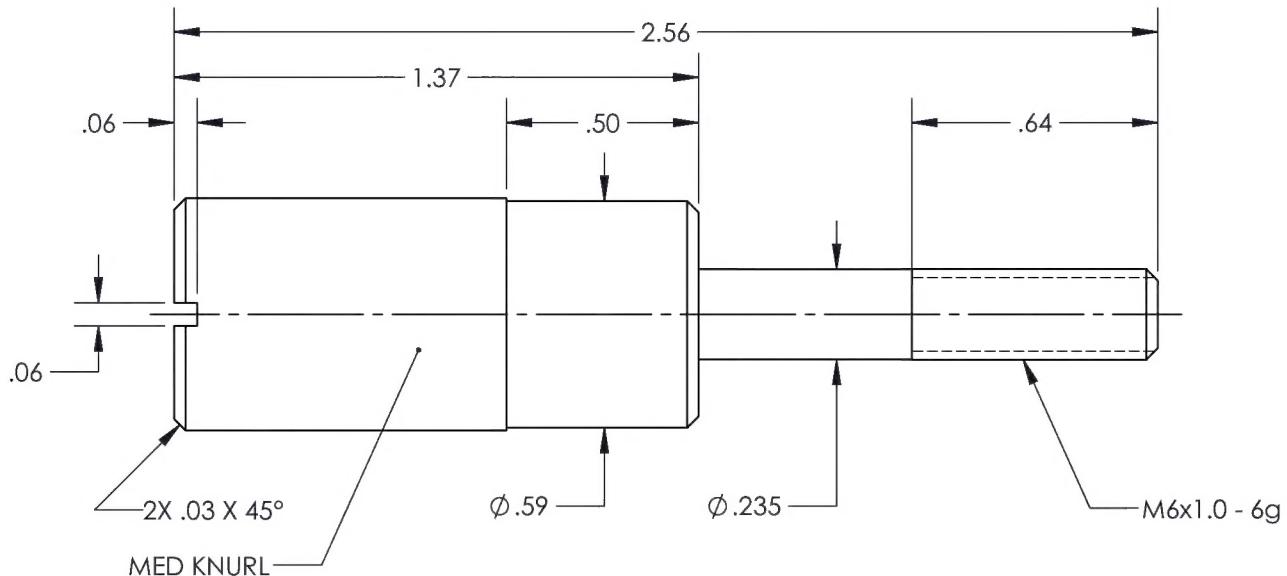
RBE1X56-136-251-3

RE<sup>1</sup>

MATERIAL STEEL		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
HEAT TREAT		.000 ± .005 FRACTIONS ± 1/8	
FINISH SEE -1		.000 ± .01 ANGLES ± 5°	
SPEC		X ± .1 SURFACES = 125 ✓	
DRAWN BY: DUERFELDT		1. BREAK ALL SHARP EDGES .015 X 45° OR .015R	
CHECKED: CLOUGH		2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
OPPS APPR: ANDERSON		3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
QA APPR: LINDSAY		USED ON MODEL	
APPROVED: GILBERT		H145	
SCALE	1:3	DATE	8/5/2016
SHEET 3 OF 8			

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REV	ECR	REVISIONS		
		DESCRIPTION	DATE	INITIAL APPROVED



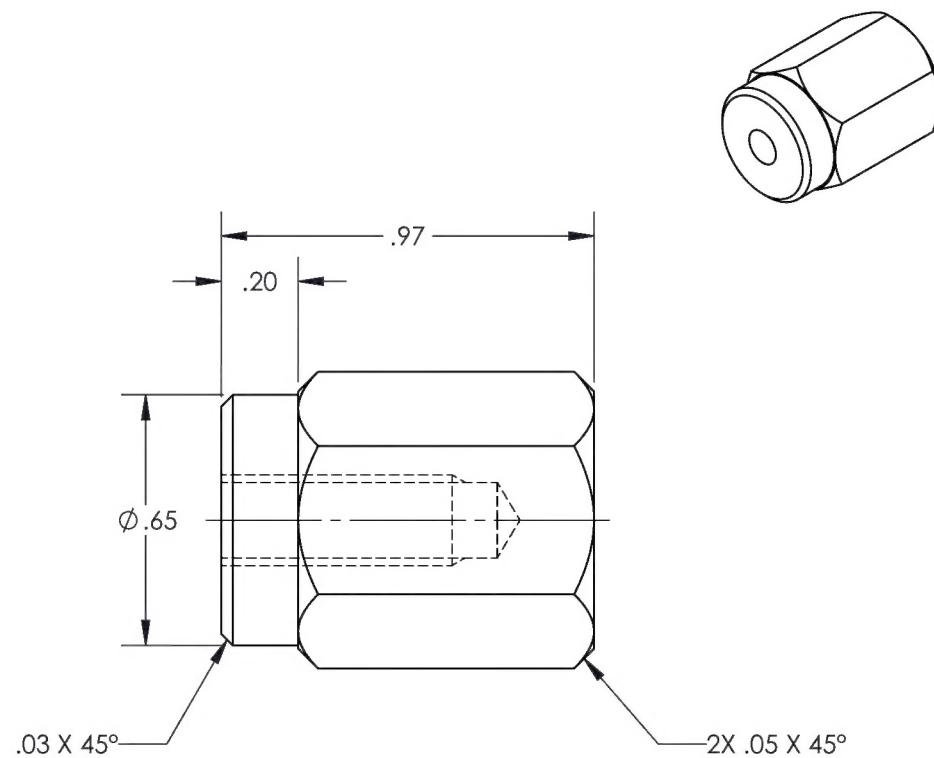
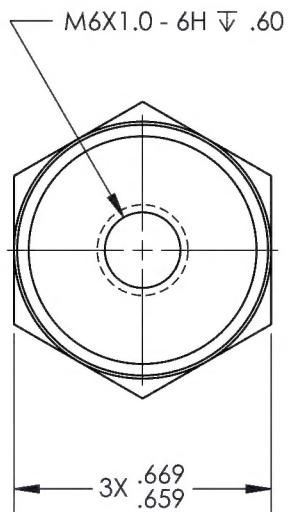
<b>DART</b> AEROSPACE	
TITLE	
PULLER	
DWG NO.	RBE1X56-136-251-5
REV	1
UNLESS OTHERWISE SPECIFIED	
DIMENSIONS ARE IN INCHES	
.XXX ± .005 FRACTIONS ± 1/8	
.XX ± .01 ANGLES ± 5°	
.X ± .1 SURFACES = 125 ✓	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
MAT'L	4140/4142
HEAT	RC 28-32
TREAT	
FINISH	ZINC PLATE
SPEC	ASTM B633 TYPE I SC 2
DRAWN BY:	DUERFELDT
CHECKED:	CLOUGH
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
USED ON MODEL	H145
SCALE	2:1
DATE	8/5/2016
SHEET 4 OF 8	

(-5)

KNURLED BOLT

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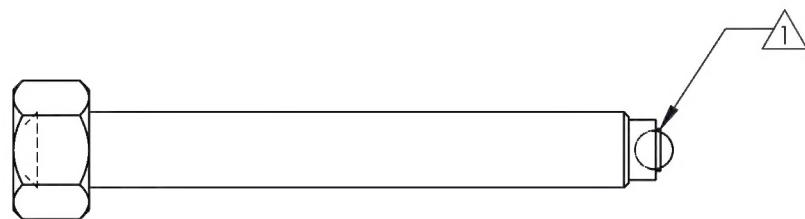
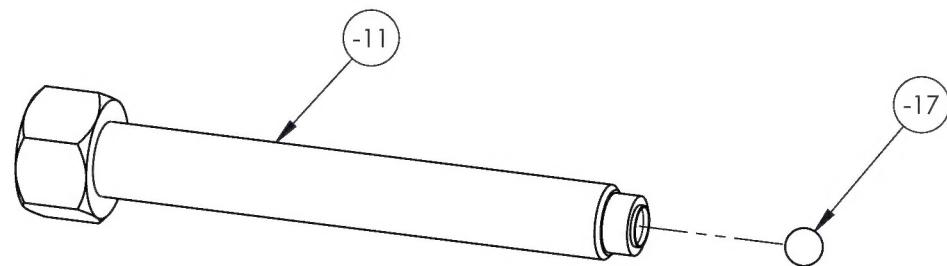
<b>DART</b> AEROSPACE	
TITLE	
PULLER	
DWG NO.	RBE1X56-136-251-7
REV	1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
.XXX ± .005 FRACTIONS ± 1/8	
.XX ± .01 ANGLES ± 5°	
X ± .1 SURFACES = 125 ✓	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
MAT'L	4140/4142
HEAT	RC 28-32
TREAT	
FINISH	ZINC PLATE
SPEC	ASTM B633 TYPE I SC 2
DRAWN BY:	DUERFELDT
CHECKED:	CLOUGH
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
USED ON MODEL	H145
SCALE	2:1
DATE	8/5/2016
SHEET 5 OF 8	

(-7)

SPECIAL NUT

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(-9)

BOLT ASSEMBLY

NOTE:

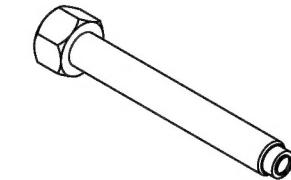
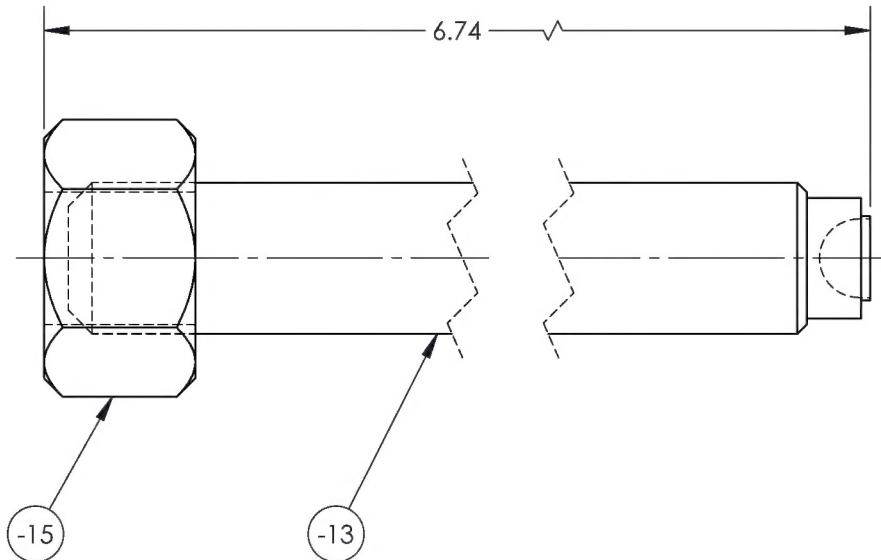
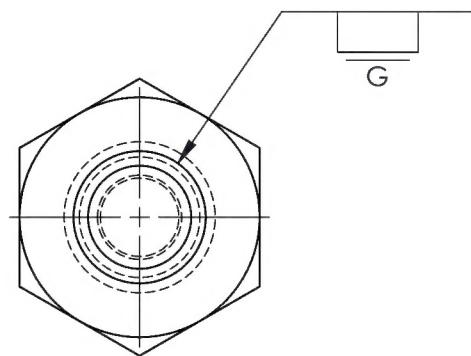
⚠ PEEN OVER LIP OF -11 BOLT WELDMENT AFTER  
INSTALLING -17 BEARING BALL. -17 BEARING  
BALL MUST ROTATE FREELY.



TITLE	
PULLER	
DWG NO.	RBE1X56-136-251-9
REV	1
MATERIAL	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
HEAT	.XXX ± .005 FRACTIONS ± 1/8
TREAT	.XX ± .01 ANGLES ± 5°
FINISH	X ± .1 SURFACES = 125
SPEC	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	
DRAWN BY:	DUERFELDT
CHECKED:	CLOUGH
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
USED ON MODEL	H145
SCALE	1:2
DATE	8/5/2016
SHEET 6 OF 8	

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BOLT WELDMENT

(-11)

TITLE	
PULLER	
DWG NO.	RBE1X56-136-251-11
REV	1
MAT'L	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT	.XXX ± .010 FRACTIONS ± 1/8
TREAT	.XX ± .03 ANGLES ± 1°
FINISH	X ± .1 SURFACES = 125 ✓
SPEC	ASTM B633 TYPE I SC 2
DRAWN BY:	DUERFELDT
CHECKED:	CLOUGH
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
USED ON MODEL	H145
SCALE	1:1
DATE	8/5/2016
SHEET 7 OF 8	

**DART**  
AEROSPACE

PULLER

RBE1X56-136-251-11

1

1. BREAK ALL SHARP EDGES  
.015 x 45° OR .015R

2. DIMENSIONAL LIMITS APPLY  
AFTER PLATING

3. INTERPRET DIM AND TOL PER  
ASME Y14.5M-2009

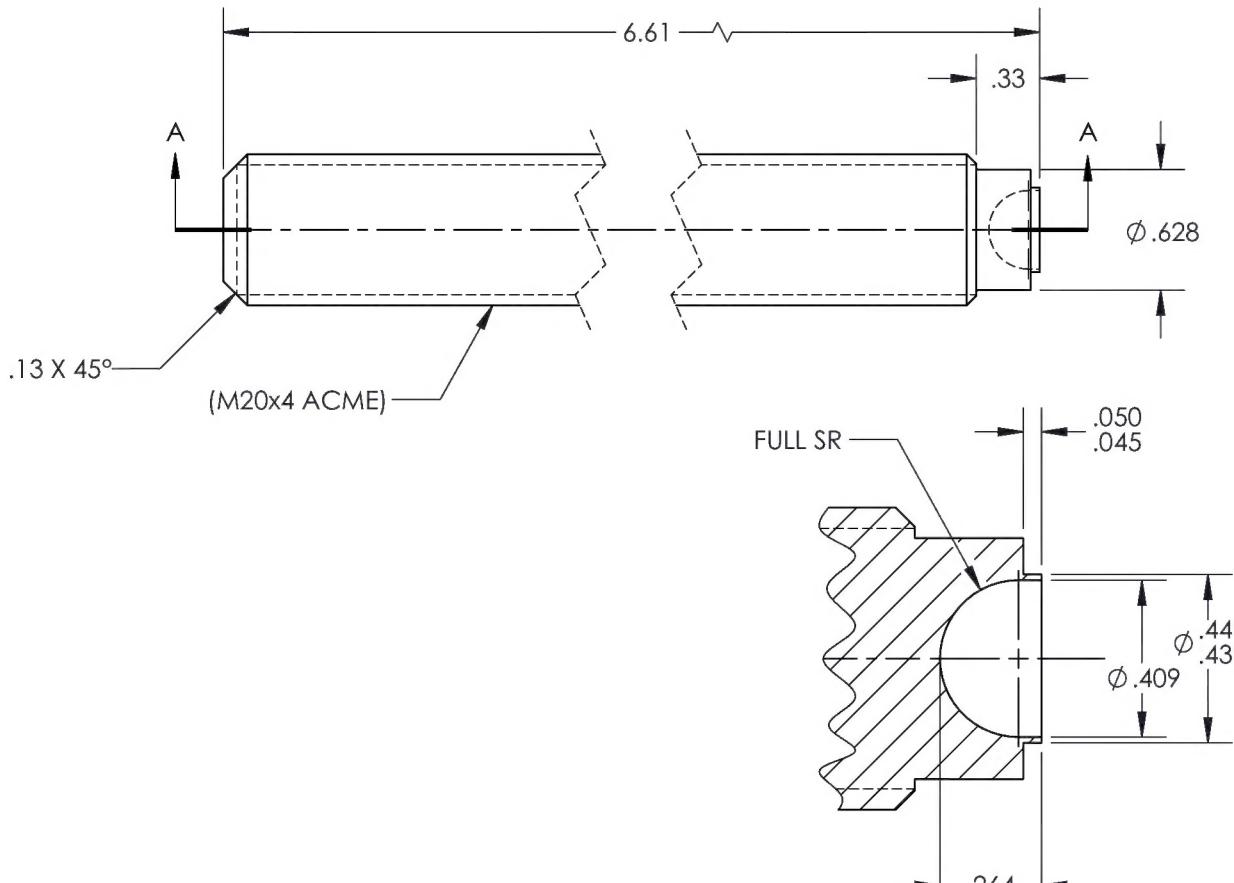
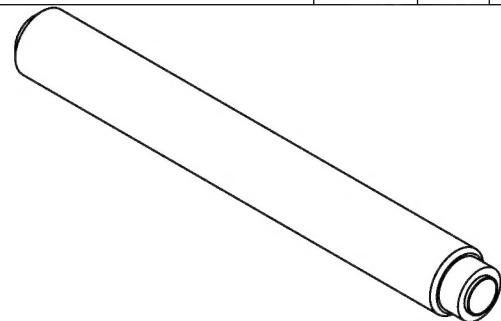
USED ON MODEL

H145

SCALE 1:1 DATE 8/5/2016 SHEET 7 OF 8

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		DESCRIPTION	DATE	INITIAL
				APPROVED



ACME ROD

(-13)

<b>DART</b> <b>AEROSPACE</b>	
TITLE	
PULLER	
DWG NO.	RBE1X56-136-251-13
REV	1
MAT'L	STEEL
HEAT	UNLESS OTHERWISE SPECIFIED
TREAT	DIMENSIONS ARE IN INCHES
FINISH SEE -11	.XXX ± .005 FRACTIONS ± 1/8
SPEC	.XX ± .01 ANGLES ± 5°
DRAWN BY:	DUERFELDT
CHECKED:	CLOUGH
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
USED ON MODEL	EC 145
SCALE	1:1
DATE	8/5/2016
SHEET	8 OF 8